Michael F. Del Casino
Regulatory Division Manager

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August 17, 2000

00-109

Mr. Dale Hatfield
Chief, Office of Engineering and Technology
Federal Communications Commission
2000 M Street NW, Suite 480
Washington, DC 20554

Dear Mr. Hatfield:

As required by Part 63.100(a) of the Commissions Rules, AT&T hereby files its Final Service Disruption Report for an AT&T network outage.

1. DATE / INCIDENT LOCATION TIME:

July 18, 2000 05:52 AM EDT

2. GEOGRAPHICAL AREA AFFECTED:

Albuquerque, NM

3. CUSTOMERS AFFECTED (APPROXIMATELY):

34,274 (based on blocked calls)

4. TYPES OF SERVICES AFFECTED:

Intertoll and Toll Access

5. DURATION OF OUTAGE:

2 hours 23 minutes

6. BLOCKED CALLS:

102,822

7A. CAUSE OF INCIDENT:

During a maintenance activity, an AT&T technician removed power from the Albuquerque, NM 4ESS in order to place a diagnostic fault insertion board in the Time Slot Interchange (TSI). The technician removed the circuit pack to place the insertion board, but when he replaced the pack in the slot he inserted the wrong type, which caused the TSI to duplex fail. As power was restored to the switch, loss of communication occurred to the peripheral units, resulting in the service disruption.

7B. EQUIPMENT NAME / TYPE:

4ESS

7C. PART OF NETWORK:

Albuquerque, NM

8. RESTORATION METHODS:

Manual attempts were made to recover the switch and when power was removed for the second time, it was discovered that circuit packs were in the wrong slots. Communication to the peripheral units was restored when the circuit packs were placed in the proper slot locations.

9. STEPS TO PREVENT REOCCURRENCE:

AT&T reconfirmed with technicians, the critical step to verify slot locations and corresponding circuit pack types before allowing insertions into the frames.

10. APPLICABLE BEST PRACTICES:

AT&T has reviewed the Network Reliability: A Report to the Nation, June 1993 and has evaluated all best practices in SECTION C – SOFTWARE AND SWITCHING SYSTEM RELIABILITY: CAUSE, CURE, OR BOTH? The following practices have been identified as the most applicable to this incident, and will be explored as potential safety fixes in order to prevent future service disruptions of this nature.

Section 5.1.3.1 – Procedural error should be replaced with an additional layer of problem definition that would include but not be limited to:

- human factors: not clearly marked, equipment layout not consistent, machine to people communication ambiguous, etc.
- system action: allowed improper request, did not warn of severity of requested action, etc.

Section 5.1.3.6 – System Suppliers should enhance existing, or establish new, standards for system robustness to prevent switching systems from accepting or allowing service affecting activity without a positive confirmation. These robustness standards should be applied to software (e.g., input verification, flow control validation, undo, etc.), hardware (e.g., lighting, labeling, numbering, positioning, warning indication, etc.).

Sincerely,

This form should be sent for the following timeframes:
B/C 90,000 – 149,999 3 days
B/C 150,000 & greater 120 minutes

00-109

AT&T
Initial Service Disruption Report

FAX TO: FCC WATCH OFFICE, WASHINGTON, DC — 202-632-6975 Voice, 202-418-2812 FAX

ALTERNATE FCC WATCH OFFICER — 202-418-2813 FAX

1.	Date/Time of Incident	July 18, 2000 04:28 Mount. Daylight 06:28 EDT
2.	Geographic area affected	ALBUQUERQUE, NM
3.	Customers affected (est)	30K +
4.	Types of service affected	All Switch Services
5.	Duration of outage	1 Hour 42 minutes
6.	Blocked calls (est)	90K +
7a	Cause of inicident	Under Investigation
7b	Equipment name/types	4ESS
7c	Part of network affected	ALBUQUERQUE, NM
8.	Restoration methods used	N/A
9.	Steps to prevent recurrences	N/A

AT&T contact person: **Mike DelCasino**
Telephone number: **202-457-2023**
Date/Time of report: July 18, 2000 09:55 EDT

MOP 3.02 (for form instructions) called 07-18-00 10:11 AM/LP Revised 8/3/99 FCC form.doc